Apprenticeship and Industry Training

Locksmith

Apprenticeship Course Outline

5016 (2016)

Alberta

Apprenticeship and Industry Training

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Locksmith : apprenticeship course outline.

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Locksmith
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Course Outline

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Apprenticeship

Apprenticeship is post-secondary education with a difference. Apprenticeship begins with finding an employer. Employers hire apprentices, pay their wages and provide on-the-job training and work experience. Approximately 80 per cent of an apprentice's time is spent on the job under the supervision of a certified journeyperson or qualified tradesperson. The other 20 per cent involves technical training provided at, or through, a post-secondary institution – usually a college or technical institute.

To become certified journeypersons, apprentices must learn theory and skills, and they must pass examinations. Requirements for certification—including the content and delivery of technical training—are developed and updated by the Alberta Apprenticeship and Industry Training Board on the recommendation of Locksmith Provincial Apprenticeship Committee.

The graduate of the locksmith apprenticeship program is a certified journeyperson who will be able to:

- adhere to safe work practices
- perform assigned tasks in accordance with quality and production standards required by industry
- apply the principles of locksmithing
- demonstrate locksmiths' code of conduct
- use reference materials to prepare orders for locks, safes and related equipment
- operate tools and equipment as used in the locksmith trade
- maintain the integrity of a high security lock system
- demonstrate procedures for opening secured entry
- install locks and related hardware
- develop master key systems
- apply the principles of electric, electronic and electrified locking systems
- describe the operation of safes and related equipment
- apply codes and regulations related to the locksmith trade

Apprenticeship and Industry Training System

Industry-Driven

Alberta's apprenticeship and industry training system is an industry-driven system that ensures a highly skilled, internationally competitive workforce in more than 50 designated trades and occupations. This workforce supports the economic progress of Alberta and its competitive role in the global market. Industry (employers and employees) establishes training and certification standards and provides direction to the system through an industry committee network and the Alberta Apprenticeship and Industry Training Board. The Alberta government provides the legislative framework and administrative support for the apprenticeship and industry training system.

Alberta Apprenticeship and Industry Training Board

The Alberta Apprenticeship and Industry Training Board provides a leadership role in developing Alberta's highly skilled and trained workforce. The board's primary responsibility is to establish the standards and requirements for training and certification in programs under the Apprenticeship and Industry Training Act. The board also provides advice to the Minister of Advanced Education on the needs of Alberta's labour market for skilled and trained workers, and the designation of trades and occupations.

The thirteen-member board consists of a chair, eight members representing trades and four members representing other industries. There are equal numbers of employer and employee representatives.

Industry Committee Network

Alberta's apprenticeship and industry training system relies on a network of industry committees, including local and provincial apprenticeship committees in the designated trades, and occupational committees in the designated occupations. The network also includes other committees such as provisional committees that are established before the designation of a new trade or occupation comes into effect. All trade committees are composed of equal numbers of employer and employee representatives. The industry committee network is the foundation of Alberta's apprenticeship and industry training system.

Local Apprenticeship Committees (LAC)

Wherever there is activity in a trade, the board can set up a local apprenticeship committee. The board appoints equal numbers of employee and employer representatives for terms of up to three years. The committee appoints a member as presiding officer. Local apprenticeship committees:

- monitor apprenticeship programs and the progress of apprentices in their trade, at the local level
- make recommendations to their trade's provincial apprenticeship committee (PAC) about apprenticeship and certification in their trade
- promote apprenticeship programs and training and the pursuit of careers in their trade
- make recommendations to the board about the appointment of members to their trade's PAC
- help settle certain kinds of disagreements between apprentices and their employers
- carry out functions assigned by their trade's PAC or the board

Provincial Apprenticeship Committees (PAC)

The board establishes a provincial apprenticeship committee for each trade. It appoints an equal number of employer and employee representatives, and, on the Pac's recommendation, a presiding officer - each for a maximum of two terms of up to three years. Most PACs have nine members but can have as many as twenty-one. Provincial apprenticeship committees:

- Make recommendations to the board about:
    - standards and requirements for training and certification in their trade
    - courses and examinations in their trade
    - apprenticeship and certification
    - designation of trades and occupations
    - regulations and orders under the Apprenticeship and Industry Training Act
- monitor the activities of local apprenticeship committees in their trade
- determine whether training of various kinds is equivalent to training provided in an apprenticeship program in their trade
- promote apprenticeship programs and training and the pursuit of careers in their trade
- consult with other committees under the Apprenticeship and Industry Training Act about apprenticeship programs, training and certification and facilitate cooperation between different trades and occupations
- consult with organizations, associations and people who have an interest in their trade and with employers and employees in their trade
- may participate in resolving certain disagreements between employers and employees
- carry out functions assigned by the board

Locksmith PAC Members at the Time of Publication

Mr. E. Olson	Calgary	Presiding Officer
Ms. T. Collins	Leduc	Employer
Mr. J. Bryson	Calgary	Employer
Mr. R. Johnson	Calgary	Employer
Mr. M. Bencz	Edmonton	Employer
Mr. D. Cota	Red Deer	Employee
Ms. M. McDougall	Calgary	Employee
Mr. B. Ostrass	Calgary	Employee
Mr. N. Ryder	Lethbridge	Employee

Alberta Government

Alberta Advanced Education works with industry, employer and employee organizations and technical training providers to:

- facilitate industry's development and maintenance of training and certification standards
- provide registration and counselling services to apprentices and employers
- coordinate technical training in collaboration with training providers
- certify apprentices and others who meet industry standards

Apprenticeship Safety

Safe working procedures and conditions, incident/injury prevention, and the preservation of health are of primary importance in apprenticeship programs in Alberta. These responsibilities are shared and require the joint efforts of government, employers, employees, apprentices and the public. Therefore, it is imperative that all parties are aware of circumstances that may lead to injury or harm.

Safe learning experiences and healthy environments can be created by controlling the variables and behaviours that may contribute to or cause an incident or injury. By practicing a safe and healthy attitude, everyone can enjoy the benefit of an incident and injury free environment.

Alberta Apprenticeship and Industry Training Board Safety Policy

The Alberta Apprenticeship and Industry Training Board (board) fully supports safe learning and working environments and emphasizes the importance of safety awareness and education throughout apprenticeship training- in both on-the- job training and technical training. The board also recognizes that safety awareness and education begins on the first day of on-the-job training and thereby is the initial and ongoing responsibility of the employer and the apprentice as required under workplace health and safety training. However the board encourages that safe workplace behaviour is modeled not only during on-the-job training but also during all aspects of technical training, in particular, shop or lab instruction. Therefore the board recognizes that safety awareness and training in apprenticeship technical training reinforces, but does not replace, employer safety training that is required under workplace health and safety legislation.

The board has established a policy with respect to safety awareness and training:

> **The board promotes and supports safe workplaces, which embody a culture of safety for all apprentices, employers and employees. Employer required safety training is the responsibility of the employer and the apprentice, as required under legislation other than the *Apprenticeship and Industry Training Act.***

The board's complete document on its 'Apprenticeship Safety Training Policy' is available at www.tradesecrets.alberta.ca; access the website and conduct a search for 'safety training policy'.

Implementation of the policy includes three common safety learning outcomes and objectives for all trade course outlines. These common learning outcomes ensure that each course outline utilizes common language consistent with workplace health and safety terminology. Under the title of 'Standard Workplace Safety', this first section of each trade course outline enables the delivery of generic safety training; technical training providers will provide trade specific examples related to the content delivery of course outline safety training.

Occupational Health and Safety

A tradesperson is often exposed to more hazards than any other person in the work force and therefore should be familiar with and apply the Occupational Health and Safety Act, Regulations and Code when dealing with personal safety and the special safety rules that apply to all daily tasks.

Occupational Health and Safety (a division of Alberta Human Services) conducts periodic inspections of workplaces to ensure that safety regulations for industry are being observed.

Additional information is available at www.humanservices.alberta.ca

Technical Training

Apprenticeship technical training is delivered by the technical institutes and colleges in the public post-secondary system throughout Alberta. The colleges and institutes are committed to delivering the technical training component of Alberta apprenticeship programs in a safe, efficient and effective manner. All training providers place a strong emphasis on safety that complements safe workplace practices towards the development of a culture of safety for all trades.

The technical institutes and colleges work with Alberta's Apprenticeship and Industry Training Board, industry committees and Alberta Advanced Education to enhance access and responsiveness to industry needs through the delivery of the technical training component of apprenticeship programs across the Province. They develop curriculum from the course outlines established by industry and provide technical training to apprentices.

The following institutions deliver Locksmith apprenticeship technical training:

Red Deer College

Procedures for Recommending Revisions to the Course Outline

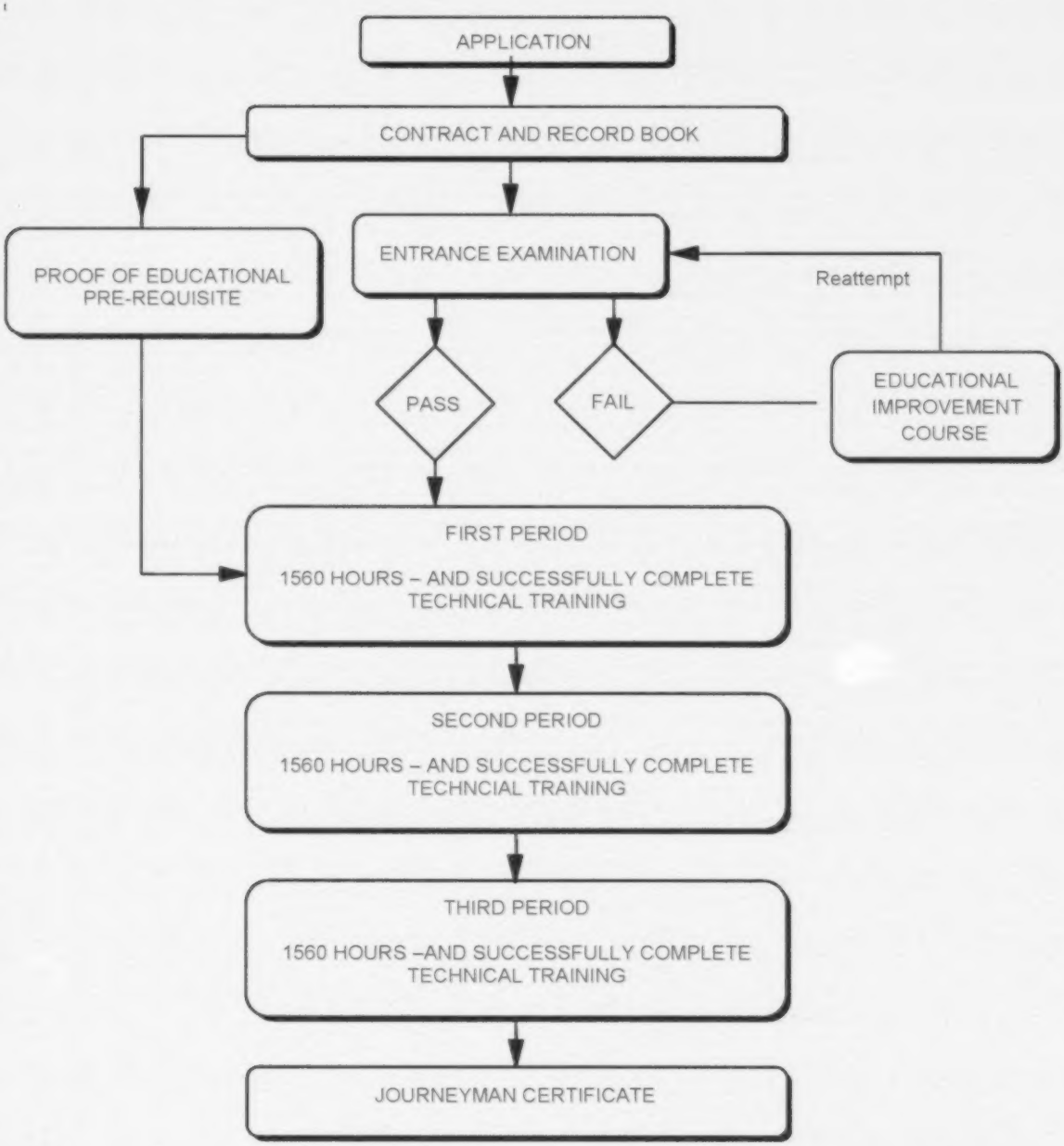
Advanced Education has prepared this course outline in partnership with the Locksmith Provincial Apprenticeship Committee.

This course outline was approved on December 18, 2015 by the Alberta Apprenticeship and Industry Training Board on a recommendation from the Provincial Apprenticeship Committee. The valuable input provided by representatives of industry and the institutions that provide the technical training is acknowledged.

Any concerned individual or group in the province of Alberta may make recommendations for change by writing to:

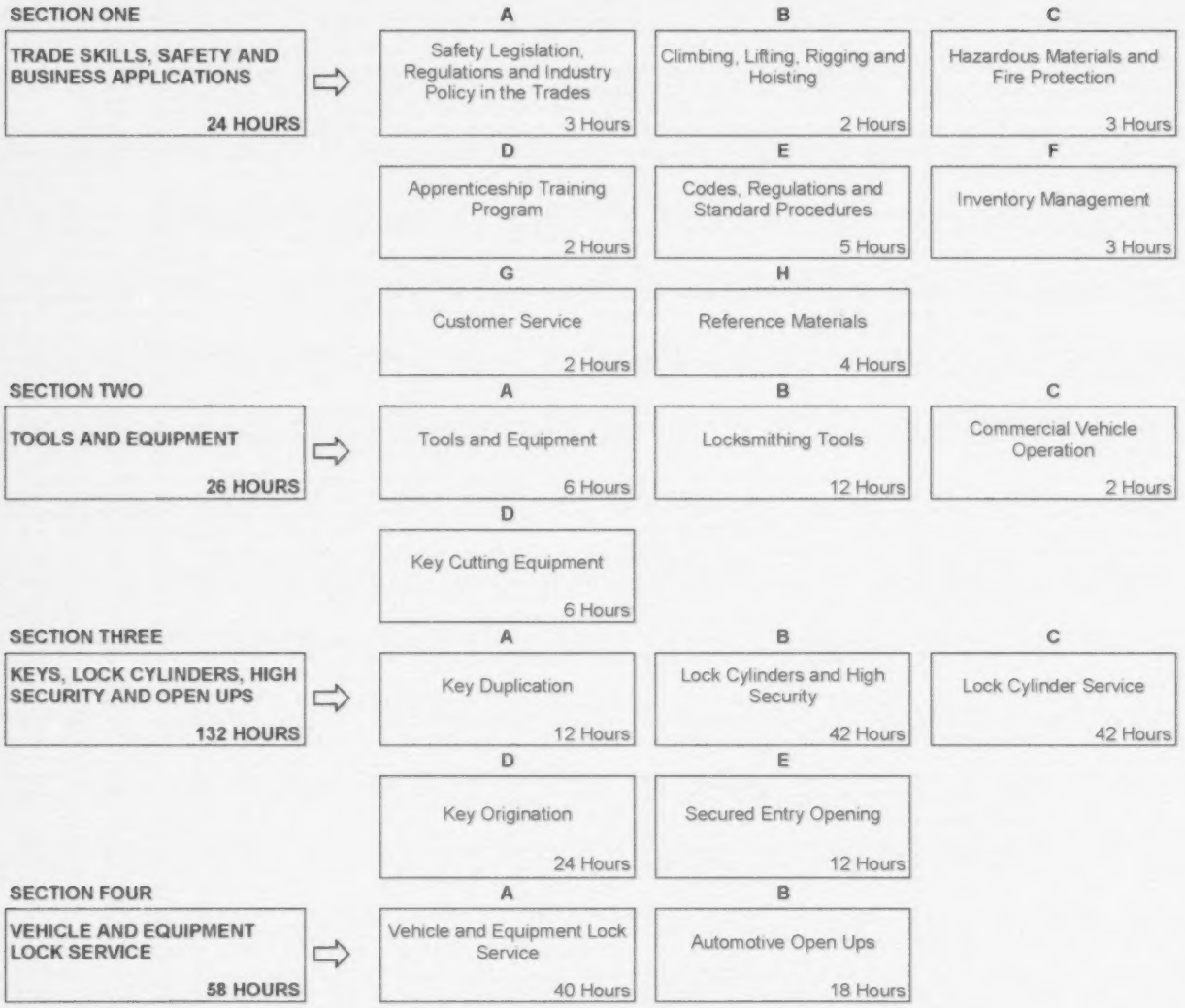
Locksmith Provincial Apprenticeship Committee
c/o Industry Programs and Standards
Apprenticeship and Industry Training
Advanced Education
10th floor, Commerce Place
10155 102 Street NW
Edmonton AB T5J 4L5

It is requested that recommendations for change refer to specific areas and state references used. Recommendations for change will be placed on the agenda for regular meetings of the Locksmith Provincial Apprenticeship Committee.

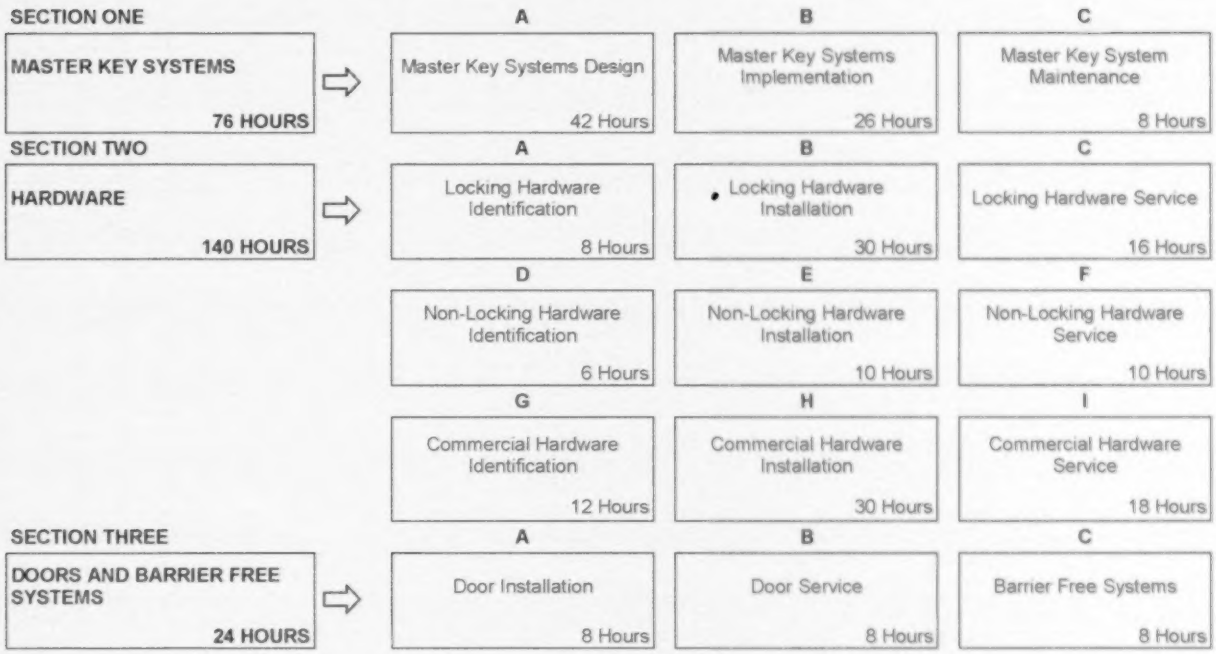

APPLICATION
CONTRACT AND RECORD BOOK
PROOF OF EDUCATIONAL PRE-REQUISITE
ENTRANCE EXAMINATION
Reattempt
PASS
FAIL
EDUCATIONAL IMPROVEMENT COURSE
FIRST PERIOD
1560 HOURS – AND SUCCESSFULLY COMPLETE TECHNICAL TRAINING
SECOND PERIOD
1560 HOURS – AND SUCCESSFULLY COMPLETE TECHNCIAL TRAINING
THIRD PERIOD
1560 HOURS –AND SUCCESSFULLY COMPLETE TECHNICAL TRAINING
JOURNEYMAN CERTIFICATE

Apprenticeship Route toward Certification

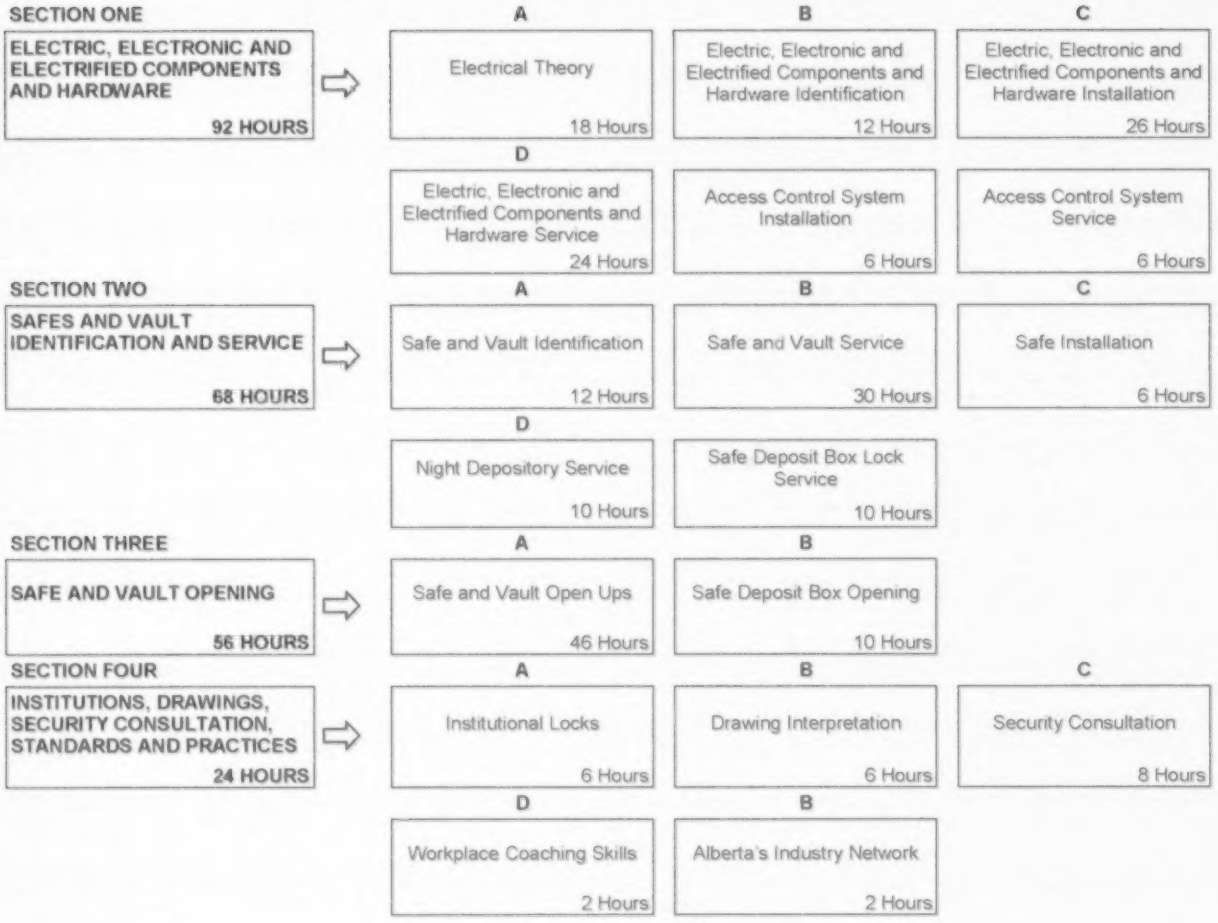
Locksmith Training Profile
FIRST PERIOD
(8 Weeks 30 Hours per Week – Total of 240 Hours)



SECOND PERIOD
(8 Weeks 30 Hours per Week – Total of 240 Hours)



THIRD PERIOD
(8 Weeks 30 Hours per Week – Total of 240 Hours)



FIRST PERIOD TECHNICAL TRAINING
LOCKSMITH TRADE
COURSE OUTLINE

UPON SUCCESSFUL COMPLETION OF THIS PROGRAM THE APPRENTICE SHOULD BE ABLE TO PERFORM THE FOLLOWING OUTCOMES AND OBJECTIVES.

SECTION ONE:..... TRADE SKILLS AND SAFETY ..... 24..HOURS

A. Safety Legislation, Regulations & Industry Policy in the Trades ..... 3 Hours

Outcome: ***Describe legislation, regulations and practices intended to ensure a safe workplace in this trade.***

1. Demonstrate the ability to apply the Occupational Health and Safety Act, Regulation and Code.
2. Explain the role of the employer and employee in regard to Occupational Health and Safety (OH&S) regulations, Worksite Hazardous Materials Information Systems (WHMIS), fire regulations, Workers Compensation Board regulations, and related advisory bodies and agencies.
3. Explain industry practices for hazard assessment and control procedures.
4. Describe the responsibilities of workers and employers to apply emergency procedures.
5. Describe positive tradesperson attitudes with respect to housekeeping, personal protective equipment and emergency procedures.
6. Describe the roles and responsibilities of employers and employees with respect to the selection and use of personal protective equipment (PPE).
7. Select, use and maintain appropriate PPE for worksite applications.

B. Climbing, Lifting, Rigging and Hoisting ..... 2 Hours

Outcome: ***Describe the use of personal protective equipment (PPE) and safe practices for climbing, lifting, rigging and hoisting in this trade.***

1. Select, use and maintain specialized PPE for climbing, lifting and load moving equipment.
2. Describe manual lifting procedures using correct body mechanics.
3. Describe rigging hardware and the safety factor associated with each item.
4. Select the correct equipment for rigging typical loads.
5. Describe hoisting and load moving procedures.

C. Hazardous Materials & Fire Protection..... 3 Hours

Outcome: ***Describe the safety practices for hazardous materials and fire protection in this trade.***

1. Describe the roles, responsibilities, features and practices related to the workplace hazardous materials information system (WHMIS) program.
2. Describe the three key elements of WHMIS.
3. Describe handling, storing and transporting procedures when dealing with hazardous material.
4. Describe safe venting procedures when working with hazardous materials.
5. Describe fire hazards, classes, procedures and equipment related to fire protection.

D. Apprenticeship Training Program.....2 Hours

Outcome: ***Apply training to become a locksmith journeyperson.***

1. Describe the contractual responsibilities of the apprentice, employer and Alberta Apprenticeship and Industry Training.
2. Describe the purpose of the apprentice record book.
3. Describe the procedure for changing employers during an active apprenticeship.
4. Describe the purpose of the course outline.
5. Describe the procedure for advancing through apprenticeship.
6. Describe advancement opportunities in this trade.

E. Codes, Regulations and Standard Procedures .....5 Hours

Outcome: ***Use codes, regulations and standard procedures.***

1. Describe codes relating to the locksmith trade.
2. Identify legal responsibility pertaining to locksmiths' code of conduct.
3. Describe acts and regulations relating to the locksmith trade.
4. Describe procedures for validating authority.
5. Describe procedures for safeguarding intellectual property.

F. Inventory Management .....3 Hours

Outcome: ***Perform inventory management.***

1. Describe purpose of work orders.
2. Describe types of work orders.
3. Describe procedures for documenting parts, labour and shop supplies.
4. Describe procedures for purchasing.
5. Describe procedures for invoicing.
6. Describe procedures for handling product.
7. Describe procedures for shipping product.
8. Describe procedures for receiving product.
9. Perform inventory management.

G. Customer Service and Sales .....2 Hours

Outcome: ***Perform customer service and sales.***

1. Describe customer courtesy.
2. Describe customer service.
3. Describe how to address customer needs and expectations.
4. Describe expectations for professional conduct during customer communications.
5. Describe types of estimates.
6. Describe estimating policies and procedures.
7. Describe customer sales techniques.

H. Reference Materials ..... **4 Hours**

Outcome: ***Use reference materials.***

1. Identify types of reference materials.
2. Describe the purpose of parts catalogues and related references.
3. Describe the procedure for using parts catalogues and related references.
4. Describe the application of reference materials.
5. Use reference materials to develop a purchase order.

SECTION TWO: ..... TOOLS AND EQUIPMENT ..... 26 HOURS

A. Tools and Equipment ..... **6 Hours**

Outcome: ***Use tools and equipment.***

1. Identify types of hand tools.
2. Identify types of power tools.
3. Identify types of equipment.
4. Describe the use of measuring and layout tools.
5. Inspect tools.
6. Inspect equipment.
7. Maintain tools.
8. Maintain equipment.
9. Use hand tools.
10. Use stationary power tools.
11. Use portable power tools.
12. Use equipment

B. Locksmithing Tools ..... **12 Hours**

Outcome: ***Use trade specific specialty tools.***

1. Identify types of locksmithing tools.
2. Describe the purpose of securing restricted tools.
3. Describe safe penetration tools.
4. Describe the application of speciality tools.
5. Use trade specific specialty tools.

C. Commercial Vehicle Operation ..... **2 Hours**

Outcome: ***Operate a commercial vehicle.***

1. Identify the requirements to operate a commercial vehicle.
2. Describe the procedure for conducting a commercial vehicle inspection.
3. Describe regulatory codes for operation of a commercial vehicle.

D. Key Cutting Equipment ..... 6 Hours

Outcome: Use key cutting equipment.

1. Identify types of key-cutting equipment.
2. Describe the application of key cutting equipment.
3. Inspect key cutting equipment.
4. Calibrate key-cutting equipment.
5. Describe procedures for maintaining key cutting equipment.
6. Use key-cutting equipment.

SECTION THREE: ..... KEYS, LOCK CYLINDERS, HIGH SECURITY AND OPEN UPS ..... 132 HOURS

A. Key Duplication ..... 12 Hours

Outcome: Duplicate keys.

1. Identify types of keys.
2. Identify types of key blanks.
3. Identify the parts of a key.
4. Identify the composition of keys.
5. Use reference materials to identify keys.
6. Measure keys.
7. Describe the authorization process for duplicating restricted keys.
8. Describe methods of key duplication.
9. Duplicate keys using hand tools.
10. Duplicate keys.
11. Duplicate broken keys.

B. Lock Cylinders and High Security ..... 42 Hours

Outcome: Rekey lock cylinders.

1. Identify types of lock cylinders.
2. Describe components of lock cylinders.
3. Describe key function in relation to a lock cylinder.
4. Describe the application of high security locks.
5. Describe characteristics of high security lock cylinders.
6. Describe the operating principles of high security lock cylinders.
7. Describe the process of rekeying locks.
8. Use resource material to re-key locks.
9. Remove lock cylinder from hardware.
10. Perform re-keying.

C. Lock Cylinder Service ..... 42 Hours

Outcome: Service lock cylinders.

1. Identify the purpose of servicing lock cylinders.
2. Describe the procedure for servicing lock cylinders.
3. Remove a broken key.
4. Service lock cylinders.

D. Key Origination ..... 24 Hours

Outcome: Originate keys.

1. Describe methods of originating keys.
2. Use reference material to originate key.
3. Originate key by code.
4. Originate key by sighting.
5. Originate key by disassembling lock and lock cylinders.
6. Originate key by picking and reading a lock.
7. Originate key using impressioning techniques.
8. Originate a safe deposit preparatory key and restore key.
9. Originate automotive key.

E. Open Secured Entry ..... 12 Hours

Outcome: Open a secured entry.

1. Describe authorization procedures for opening secured entry.
2. Describe methods of gaining entry into locked doors.
3. Describe procedures for picking locks.
4. Describe procedures for bypassing locks.
5. Describe procedures for drilling locks.
6. Use methods for opening secured entry.
7. Use methods to gain entry of malfunctioning locks.

SECTION FOUR: ..... VEHICLE AND EQUIPMENT LOCK SERVICE ..... 58 HOURS

A. Vehicle and Equipment Lock Service ..... 40 Hours

Outcome: Service vehicle and equipment locking mechanisms.

1. Identify vehicle locking components.
2. Describe vehicle lock design concepts.
3. Describe equipment lock design concepts.
4. Identify transponder systems.
5. Describe programming transponder systems.
6. Use reference material.

7. Service vehicle locking mechanisms.
8. Service equipment locking mechanisms

B. Automotive Open Ups ..... 18 Hours

Outcome: ***Open automotive vehicles.***

1. Describe the procedure for obtaining authorization to open vehicles.
2. Describe automotive locking systems.
3. Describe inflatable restraints systems.
4. Describe anti-theft systems.
5. Describe tools used for opening vehicles.
6. Describe opening techniques.
7. Use resource materials to open vehicles.
8. Open automotive vehicles.

SECOND PERIOD TECHNICAL TRAINING
LOCKSMITH TRADE
COURSE OUTLINE

UPON SUCCESSFUL COMPLETION OF THIS PROGRAM THE APPRENTICE SHOULD BE ABLE TO PERFORM THE FOLLOWING OUTCOMES AND OBJECTIVES.

SECTION ONE:..... MASTER KEY SYSTEMS..... 76 HOURS

A. Master Key System Design.....42 Hours

Outcome: Design a master key system.

1. Identify the types of master key systems.
2. Describe the procedure for master key planning.
3. Describe the procedure for master key charting.
4. Identify rotating constant master keying design.
5. Identify positional master keying design.
6. Identify master keying of small format i/c cores design.
7. Describe standard progression master keying design.
8. Develop a master key system plan.
9. Use standard progression method to generate bitting list.
10. Generate pinning charts.

B. Master Key System Implementation.....26 Hours

Outcome: Implement a master key system.

1. Describe the process of pinning cylinders to a master key.
2. Describe resource materials used to implement a master key system.
3. Generate keys from a master key system.
4. Re-key lock cylinders to master key system.
5. Implement a master key system.

C. Master Key System Maintenance.....8 Hours

Outcome: Maintain a master key system.

1. Describe maintaining the integrity of master key system security.
2. Describe master key record maintenance.

SECTION TWO:.....HARDWARE..... 140 HOURS

A. Locking Hardware Identification.....8 Hours

Outcome: Select locking hardware.

1. Describe types of locking hardware.
2. Describe lock specifications.
3. Describe the functions of locking hardware.

4. Describe locking hardware applications.
5. Describe locking hardware used in office furniture applications.
6. Describe application of related codes when selecting locking hardware.

B. Locking Hardware Installation ..... 30 Hours

Outcome: Install locking hardware.

1. Describe the procedure for installing cylindrical locking hardware.
2. Install cylindrical locking hardware.
3. Install office furniture locks.
4. Install locking hardware.

C. Locking Hardware Service ..... 16 Hours

Outcome: Service locking hardware.

1. Describe the servicing of locking hardware and components.
2. Describe retrofitting locking hardware.
3. Service cylindrical lock hardware.
4. Service office furniture locks.
5. Retro fit locking hardware.
6. Service locking hardware.

D. Non-Locking Hardware Identification ..... 6 Hours

Outcome: Select non-locking hardware.

1. Identify non-locking hardware.
2. Describe types of non-locking hardware.
3. Describe classifications of non-locking hardware.
4. Describe the function of non-locking hardware.
5. Describe door closers.
6. Describe application of related codes when selecting non-locking hardware.

E. Non-Locking Hardware Installation ..... 10 Hours

Outcome: Install non-locking hardware.

1. Describe the procedure for installing non-locking hardware.
2. Install blocker plates.
3. Install hinges.
4. Install an exit alarm.
5. Install a door saver.
6. Install a door closer.
7. Install non-locking hardware.
8. Use non-locking hardware to repair a damaged door.

F. Non-Locking Hardware Service ..... 10 Hours

Outcome: ***Service non-locking hardware.***

1. Describe purpose for servicing non-locking assemblies.
2. Describe servicing pivots on aluminum glass doors.
3. Adjust door closers.
4. Service non-locking assemblies.

G. Commercial Hardware Identification ..... 12 Hours

Outcome: ***Apply knowledge of commercial hardware.***

1. Describe mortise locks.
2. Describe narrow stile locks.
3. Describe exit devices.
4. Describe keyless entry locks.
5. Describe types of commercial hardware.
6. Describe application of related codes when selecting commercial hardware.

H. Commercial Hardware Installation ..... 30 Hours

Outcome: ***Install commercial hardware.***

1. Describe procedures for installing commercial hardware.
2. Install mortise locks.
3. Install narrow stile locks.
4. Install exit devices.
5. Install keyless entry locks.
6. Install commercial hardware.

I. Commercial Hardware Service ..... 18 Hours

Outcome: ***Service commercial hardware.***

1. Describe servicing of commercial hardware.
2. Describe servicing of exit devices.
3. Describe servicing of keyless entry locks.
4. Service commercial hardware.
5. Service mortise locks.
6. Service narrow stile locks.
7. Service exit device.
8. Service keyless entry locks.
9. Replace a flush bolt in an aluminum glass door.
10. Change user credentials of keyless entry locks.

SECTION THREE:.....DOORS AND BARRIER FREE SYSTEMS.....24 HOURS

A. Door Installation ..... 8 Hours

Outcome: ***Install doors.***

1. Describe types of doors.
2. Describe types of door frames.
3. Describe procedures for installing doors.
4. Describe application of related codes to door installations.
5. Install a door.

B. Door Service..... 8 Hours

Outcome: ***Service doors.***

1. Describe procedures for servicing doors.
2. Describe procedures for servicing door frames.
3. Service a door.

C. Barrier-Free Systems ..... 8 Hours

Outcome: ***Design a barrier-free system.***

1. Identify barrier-free hardware.
2. Describe procedures for installing barrier-free hardware.
3. Describe procedures for servicing barrier-free hardware.
4. Describe application of related codes to barrier-free hardware.
5. Design a barrier-free system.

THIRD PERIOD TECHNICAL TRAINING
LOCKSMITH TRADE
COURSE OUTLINE

UPON SUCCESSFUL COMPLETION OF THIS PROGRAM THE APPRENTICE SHOULD BE ABLE TO PERFORM THE FOLLOWING OUTCOMES AND OBJECTIVES.

SECTION ONE..... ..ELECTRIC, ELECTRONIC AND ELECTRIFIED COMPONENTS ..... 92 HOURS AND HARDWARE

A. Principles of Electricity ..... 18 Hours

Outcome: ***Apply the principles of electricity.***

1. Describe the principles of electricity.
2. Describe the difference between low voltage ac and dc circuits.
3. Describe features of low voltage power supplies and batteries.
4. Solve simple circuit problems.

B. Electric, Electronic and Electrified Components and Hardware Identification ..... 12 Hours

Outcome: ***Apply knowledge of electric, electronic, and electrified hardware.***

1. Identify electric, electronic and electrified system components.
2. Describe the operation of electronic components.
3. Describe precautions required for handling electronics.
4. Describe the features of multimeters and electrical diagnosing equipment.
5. Describe electronic timers.
6. Describe electromagnetic locks.
7. Describe electric, electronic and electrified devices.
8. Describe electronic keypads and card readers.
9. Describe features of various electric strikes.
10. Describe features of various electric and electronic locks.
11. Describe video surveillance systems.
12. Identify application of related codes when selecting electric, electronic or electrified hardware.

C. Electric, Electronic and Electrified Components and Hardware Installation ..... 26 Hours

Outcome: ***Install electrical and electronic hardware.***

1. Describe retrofitting using electronic and electrified hardware.
2. Use low voltage circuit components.
3. Use a multimeter to test electronic components.
4. Install an electric strike on door frame.
5. Install an electromagnetic lock on door frame.
6. Install video surveillance.
7. Install wiring connection to an electronic component.

8. Retrofit a door using electrified hardware.

D. Electric, Electronic and Electrified Components and Hardware Service ..... 24 Hours

Outcome: ***Service electrical, electronic and electrified hardware.***

1. Describe common faults in electronic components.
2. Describe electrical systems failure.
3. Describe the use of schematics for servicing dc electrical systems.
4. Adjust video surveillance equipment.
5. Troubleshoot electronic components and systems.
6. Troubleshoot power supplies and batteries.
7. Service the wiring connection to an electronic component.
8. Service electrical hardware systems.

E. Access Control System Installation ..... 6 Hours

Outcome: ***Install access control system.***

1. Describe types of access control systems.
2. Describe access control planning.
3. Describe the procedure for retrofitting access controls.
4. Install an access control system.
5. Program an access control system.

F. Access Control System Service..... 6 Hours

Outcome: ***Service access control system.***

1. Use reference materials to change access control programming.
2. Troubleshoot access control systems.
3. Service access control system.

SECTION TWO:.....SAFE AND VAULT IDENTIFICATION AND SERVICE .....68 HOURS

A. Safe and Vault Identification ..... 12 Hours

Outcome: ***Apply knowledge of safes and vaults.***

1. Describe types of safes and vaults.
2. Describe types of safe and vault components.
3. Describe features of safes and vaults.
4. Describe construction of safes and vaults.
5. Describe labels on safes and vaults.
6. Describe classifications of safes and vaults.
7. Describe hazards associated with safes and vaults.

B. Safe and Vault Service ..... 30 Hours

Outcome: ***Service safes and vaults.***

1. Describe safe and vault locks.
2. Describe combination changing procedures for safe and vault locks.
3. Describe retrofitting safe and vault locks.
4. Describe safe and vault combination lock problems.
5. Service safe and vault combination locks.
6. Service safe and vault locks.
7. Diagnose combination lock problems.
8. Service safe and vault components.

C. Safe Installation ..... 6 Hours

Outcome: ***Install safes.***

1. Describe procedures for moving safes.
2. Describe procedures for installing safes.
3. Move a safe.

D. Night Depository Service ..... 10 Hours

Outcome: ***Service night depositories.***

1. Describe the purpose of night depositories.
2. Describe types of night depositories.
3. Describe operating principles of night depositories.
4. Describe servicing procedures for night depositories.
5. Service night depositories.

E. Safe Deposit Box Lock Service ..... 10 Hours

Outcome: ***Service safe deposit box locks.***

1. Describe types of safe deposit boxes.
2. Describe safe deposit box locks.
3. Service safe deposit box locks.
4. Service a safe deposit box.

SECTION THREE: ..... SAFE AND VAULT OPENING ..... 56 HOURS

A. Safe and Vault Open Ups ..... 46 Hours

Outcome: ***Open safes and vaults.***

1. Identify barrier materials.
2. Identify alarm systems within safes and vaults.
3. Describe methods for neutralizing re-locking devices.
4. Describe entry methods for safes and vaults.

5. Describe safe lock manipulation.
6. Describe rebuilding safes.
7. Determine entry methods for safes and vaults.
8. Open combination locks.
9. Penetrate barrier materials.
10. Open safes.

B. Safe Deposit Box Opening ..... 10 Hours

Outcome: Open safe deposit boxes.

1. Describe opening methods for safe deposit boxes.
2. Describe repair methods for safe deposit boxes.
3. Create a drilling template for safe deposit boxes.
4. Open a safe deposit box by drilling and picking.
5. Open a safe deposit box by drilling lock mounting screws.
6. Repair a pick hole in a safe deposit box.
7. Repair mounting screw holes in a safe deposit box.

SECTION FOUR: ..... INSTITUTIONS, DRAWING INTERPRETATION, STANDARDS AND PRACTICES ..... 24 HOURS

A. Institutional Locks ..... 6 Hours

Outcome: Service institutional locks.

1. Describe types of institutional locks.
2. Describe application of related codes when servicing correctional hardware.
3. Describe procedures for servicing institutional locks.
4. Service a detention lever lock.

B. Drawing Interpretation ..... 6 Hours

Outcome: Interpret drawings.

1. Identify types of drawings.
2. Identify types of schedules.
3. Identify engineering symbols and specifications.
4. Interpret engineering symbols and specifications.
5. Interpret a hardware schedule.
6. Create a key and hardware schedule from a drawing.

C. Security Consultation ..... 8 Hours

Outcome: Perform security consultation.

1. Identify security requirements.
2. Identify forensics in locksmithing.
3. Describe risk assessment.

4. Describe security management.
5. Describe security concerns in relation to the National Building Code of Canada.
6. Describe procedures for performing security surveys.
7. Perform a security survey.
8. Prepare a security analysis.

D. Workplace Coaching Skills ..... 2 Hours

Outcome: ***Use coaching skills when training an apprentice.***

1. Describe the process for coaching an apprentice.

E. Alberta's Industry Network ..... 2 Hours

Outcome: ***Describe the role of the Alberta Apprenticeship and Industry Training Board and the network of industry committees that represent the trades and occupations in Alberta.***

1. Describe Alberta's apprenticeship and industry training system.
2. Describe the roles and responsibilities of the Alberta Apprenticeship and Industry Training Board, government and post-secondary institutions.
3. Describe the roles and responsibilities of the PACs, LACs and occupational committees.

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